

We claim:-

1. A polyamide whose main chain contains a chemically bound amine selected from the group consisting of 2-methyl-1,5-diaminopentane and 1-amino-2-R-cyclopent-5-ene, where R is a functional group capable of combining with an amino group to form an amide group.
2. A polyamide as claimed in claim 1, wherein the main chain of said polyamide contains chemically bound 1-amino-2-R-cyclopent-1-ene, where R is a functional group capable of combining with an amino group to form an amide group.
3. A polyamide as claimed in claim 1 or 2, wherein R is selected from the group consisting of carboxylic acid, carboxylic ester, carboxylic amide and nitrile.
- 15 4. A polyamide as claimed in claim 1 or 2, wherein R represents nitrile.
5. A polyamide as claimed in claim 1 or 2, wherein R represents carboxylic acid.
6. A polyamide as claimed in claim 1 or 2, wherein R represents carboxylic ester.
- 20 7. A polyamide as claimed in claim 6, wherein R represents a carboxylic ester selected from the group consisting of methyl ester, ethyl ester, n-propyl ester, i-propyl ester, n-butyl ester, s-butyl ester, i-butyl ester and t-butyl ester.
- 25 8. A polyamide as claimed in claim 1, wherein the main chain of said polyamide contains chemically bound 2-methyl-1,5-diaminopentane.
9. A polyamide as claimed in any of claims 1 to 8, wherein the main chain of said polyamide contains a chemically bound amine selected from the group consisting of 2-methyl-1,5-diaminopentane and 1-amino-2-R-cyclopent-1-ene, where R is a functional group capable of combining with an amino group to form an amide group, at a level in the range from 0.001 mol% to 2 mol%, based on 1 mol of acid amide groups of said polyamide.
- 35 10. A process for preparing a polyamide, which comprises converting monomers suitable for forming a polyamide into a polyamide in the presence of at least one amine selected from the group consisting of 2-methyl-1,5-diaminopentane and 1-amino-2-R-cyclopent-1-ene, where R is a functional group capable of combining with an amino group to form an amide group, as per any of claims 1 to 40 9.

11. A process for preparing a polyamide, which comprises converting oligomers suitable for forming a polyamide into a polyamide in the presence of at least one amine selected from the group consisting of 2-methyl-1,5-diaminopentane and 1-amino-2-R-cyclopent-1-ene, where R is a functional group capable of combining with an amino group to form an amide group, as per any of claims 1 to 9.
- 5
12. Fibers, films and moldings comprising a polyamide as per any of claims 1 to 9.